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# NAMING, SAYING, AND STRUCTURE

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ABSTRACT. It is commonplace for philosophers to distinguish mere truths from truths that perspicuously represent the world's structure. According to a popular view, the perspicuous truths are supposed to be metaphysically revelatory and to play an important role in the accounts of law-hood, confirmation, and linguistic interpretation. Yet, there is no consensus about how to characterize this distinction. I examine strategies developed by Lewis and by Sider in his *Writing the Book of the World* which purport to explain this distinction in terms of vocabulary: the truths that represent the world perspicuously have better, joint-carving vocabulary. I argue that the distinction between a perspicuous and mere truth concerns both the vocabulary of the sentence and its grammar. I then show that the collective motivations for distinguishing perspicuous from mere truths do not allow them to properly impose constraints on grammar.

Philosophers are accustomed to thinking of the logical structure of the world as mirrored in language. On this view, reality has some intrinsic structure. Our sentences are meant to represent this structure. Those taken by this idea—especially in the analytic tradition—often find logical imperfections in the language we actually use. This language arose from our practical needs as much as our desire to represent the structure of the world. One task of philosophy is to rephrase our untidy but true sentences into a logically perfect notation that corresponds to the objective structure of the world. As Wisdom (1933: 195) once said, in substituting one sentence by another, the philosopher “gives insight into Structure.” In outline, this is the basic picture of a recent trend in metaphysics. I take as a core instance Sider’s *Writing the Book of the World*: reality has an intrinsic structure. Equivalently, it has a privileged description.<sup>1</sup> Philosophy – and inquiry generally – aims at finding this privileged description.

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<sup>1</sup>Sider (2012: vii): “The world has a distinguished structure, a privileged description.”

But what privileges the sentences of this description? According to Sider, these sentences are privileged not only because they are true, but because their vocabulary is metaphysically privileged. This vocabulary *carves nature at the joints* rather than cutting it into arbitrary bits. Carving at the joints is not a property an expression has in virtue of its linguistic or psychological profile, but in virtue of corresponding to a worldly element that is *elite* or *fundamental*.<sup>2</sup> A language whose sentences are composed only of joint-carving vocabulary is a *structural language*. A truth of this language is a *structural truth*.<sup>3</sup> The set of structural truths gives a *complete* and *privileged* description of the world.<sup>4</sup>

Sider suggests that world has a privileged description in order to solve puzzles that arise from deviant descriptions. Consider theories expressed using the predicates ‘is grue’ and ‘is bleen’, introduced in Goodman (1983b). These predicates are governed by the following axiom schemata.<sup>5</sup>

**Grue:** ‘ $\alpha$  is grue’ is true if and only if  $\alpha$  is green and observed before time  $t$  or is blue and unobserved before time  $t$ .

**Bleen:** ‘ $\alpha$  is bleen’ is true if and only if  $\alpha$  is green and observed before time  $t$  or is blue and unobserved before time  $t$

These expressions are strange. It is unnatural to characterize emeralds and frogs as grue in addition to characterizing them as green. It offers a strange metaphysics. It

<sup>2</sup>Sider (2012: 12, 221-2) repeatedly characterizes this relation as correspondence.

<sup>3</sup>I take the following passages as evidence that Sider is committed to this characterization of structural truth.

- [A] fact is fundamental when it is stated in joint-carving terms. (Sider 2012: iv)
- [I]n a fundamental language, all and only primitive expressions carve at the joints. Thus ‘ $\mathfrak{S}(\alpha)$ ’ will be true iff  $\alpha$  is a primitive expression. (Sider 2012: 92, footnote 14. ‘ $\mathfrak{S}(\dots)$ ’ is Sider’s regimentation of ‘is fundamental’.)
- A fundamental truth is a truth involving only fundamental terms. (Sider 2012: 128)
- Call a sentence structural iff each of its words carve at the joints. [...] And call a [sentence] a structural truth iff it is true and structural. [...] Suppose...that it is a fundamental truth that there are electrons. For me, this boils down to the fact that i) there are indeed electrons; and ii) electron-hood and existential quantification carve at the joints. (Sider 2012: 147)
- [A] structural truth is just a true sentence composed of only joint-carving expressions[.] (Sider 2012: 148)

<sup>4</sup>Sider explains what he means by completeness in §7.1.

<sup>5</sup>Note that each of these is an axiom *schema* that describe more specific instances. Thus, there is no use-mention confusion. If one were to attempt to express these axiom schemata as generalities, one would need to talk about the referent of ‘ $\alpha$ ’.

is as though *grue* things constitute some important class alongside the *green* things. Although I will not discuss the issues in any detail, these predicates are also notoriously ill-behaved for the purposes of formulating laws, offering explanations, confirmation, and linguistic interpretation. Indeed, Sider (2012: §1.2) takes theories formulated using ‘is *grue*’ and ‘is *bleen*’ as paradigms of deviant descriptions, but is also quick to observe that similar problems can be raised by non-predicate expressions such as deviant proper names, temporal or modal operators, or quantifiers (2012: viii, §6.1).

Sider explains the strangeness of these descriptions in terms of structural truth. In his view, structural truth is a constitutive aim of inquiry.

Achieving the goal of inquiry requires that one’s belief state reflect the world, which in addition to lack of error requires one to think of the world in its terms, to carve the world at its joints. *Wielders of non-joint-carving terms are worse inquirers.*<sup>6</sup>

Inquirers who taxonomize the world into *grue* things and *bleen* things simply use the wrong terms to describe the world, regardless of whether they thereby say true things. For this reason, the metaphysical commitments of their theories need not be taken seriously.

As evidence for the claim that inquiry aims at structural truth, Sider observes that our theory selection practices favor theories that deploy fewer primitive predicates. Sider (2012: 14) suggests that we resist theories deploying more vocabulary than is needed because they are less economical, they posit “a fuller, more complex world, a world with more structure”. Since inquirers have reason to prefer theories framed in wholly joint-carving vocabulary, Sider can justify the exclusion of other vocabulary from the standard procedures for formulating laws, offering explanations, confirmation, and interpretation. As Lewis (1999b: 42) says, “[t]he remedy [for these standard procedures] is not to tolerate such a perverse choice of primitive vocabulary.” The speakers *use the wrong terms* on account of the fact that these terms don’t *correspond to elite—fundamental—elements of the world*.

<sup>6</sup>Sider (2012: 61). Emphasis added. Compare (Sider 2009: 401).

Because sentences of the form ‘ $\alpha$  is grue’ and ‘ $\beta$  is bleen’ are Sider’s canonical examples of non-structural truths, his account should rule them as such. I will argue that the account fails to do so. The illusion to the contrary is created by artificially restricting attention to a subset of possible languages. Sider’s characterization of structural truth is developed by considering languages that contain deviant vocabulary. But I show that deviance can also result from the grammar of the language. As a consequence, there are sentences whose semantic characterizations are the same as those of ‘ $\alpha$  is grue’ and ‘ $\beta$  is bleen’, but which result not from any deviant vocabulary item in the sentence, but from the way the vocabulary items are put together. We will see that this objection parallels others that Sider himself offers against competing theories. I conclude with a discussion of how this problem arises out of Sider’s core commitments. The difficulties I raise for Sider parallel difficulties faced by the logical atomists, who also thought that the structure of the world was to be represented by the selection of a language. My argument seeks to show that we have yet to fully confront these problems.

### 1. TIGHTENING THE ACCOUNT

According to Sider, a sentence is a structural truth just in case it is true and each primitive vocabulary item composing it corresponds to a fundamental ingredient of the world. Structural truth is characterized in terms of fundamentality and correspondence. So we must have some account of these in order to understand the characterization. Sider takes the notion of fundamentality as *primitive*.<sup>7</sup> It can be *characterized* but not *analyzed*. It is regimented with an operator, ‘ $\mathfrak{S}(\dots)$ ’. I presuppose only that structural truth can be characterized as a truth whose worldly correspondents are fundamental. Thus, my argument will apply to those sympathetic to Sider, but who offer a more robust analysis of fundamentality.

Sider is more reticent about what is required for a vocabulary item to correspond to “something real” (Sider 2012: 12). But he is clear that joint-carving vocabulary item must correspond to something in the world:

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<sup>7</sup>Chapter 2 of Sider (2012) is devoted to this thesis.

[I]t would be a mistake to think of structure as concerning linguistic items. The fact [...] that ‘is negatively charged’ carves at the joints isn’t in the first instance a fact about the predicate ‘is negatively charged’. The fact is simply a fact about the concrete, nonlinguistic world—about its “charge aspect”, so to speak.<sup>8</sup>

Given this, one would expect Sider to hold that every expression corresponds to some *entity*. It is surprising, then, that Sider resists this conclusion. How are these positions compatible?

To specify the worldly correlate of an expression, Sider simply re-uses it. For concreteness, consider a simpler description of a simpler world, that of *The Muppet Show*. A description of this world is expressed in a language that contains names for the muppets such as ‘Kermit’, ‘Bunsen’, ‘Gonzo’, and so on. The language contains predicates such as ‘is green’, ‘is blue’, and so on. It contains sentential connectives such as ‘not’, ‘and’, and ‘or’. Finally, it contains quantifiers ‘there is’ and ‘for all’. The description of this world includes subject-predicate (S-P) sentences (1)-(3). Each sentence concatenates a name with a predicate.

**S-P Description:** (1) Kermit is green. (2) Bunsen is green.<sup>9</sup> (3) Gonzo is blue.

Since sentence (1) is a structural truth, the primitive expressions ‘Kermit’ and ‘is green’ are joint-carving and must correspond to fundamental elements.

Sider would specify these fundamental elements as follows: ‘Kermit’ corresponds to *Kermit* and ‘is green’ to *is green*.<sup>10</sup> While *Kermit* may be an entity, Sider would argue that *is green* is not. Thus, the worldly correlates of some expressions are not entities. Sider calls these *notions* to smooth over his discussion. The worldly correlates of expressions from other syntactic categories can also be given by disquoting. Thus, the expressions ‘not’, ‘and’, ‘or’, and ‘there is’ correspond

<sup>8</sup>(Sider 2012: 147).

<sup>9</sup>Some find this claim to be controversial.

<sup>10</sup>(Sider 2012: §6.3).

to notions *not*, *and*, *or*, and *there is*, respectively. None of these expressions will correspond to an entity.<sup>11</sup>

## 2. THE WORLD IS NOT A LIST OF ENTITIES

Alternative entity-based views characterize the privileged description by positing a number of elite entities. Terms for elite entities provide the resources to completely describe reality. As Lewis (1999b: 12) says,

A satisfactory inventory of [the elite entities] is a non-linguistic counterpart of a primitive vocabulary for a language capable of describing the world exhaustively.

Sider objects on precisely this point. The elite entities do not determine a language capable of describing the world completely. In completely describing the world, one inevitably uses some expressions or representational devices that do not correspond to entities. These expressions and representational devices can involve themselves in the kinds of mischief that expressions such as ‘is grue’ and ‘is bleen’ do. Thus, Sider concludes that our metaphysics must include elite non-entities which are the worldly correspondents of privileged syncategorematic expressions.

Does the proponent of the entity-based approach have resources to resist this argument? According to such views, the structure of the world—and thus the language capable of formulating a complete and privileged description—is determined by a list of elite entities. These might be natural properties, sparse universals, truth-makers, or fundamental entities.<sup>12</sup> How can a mere list of elite entities determine a privileged and exhaustive description?

It is clear that one cannot completely describe the world merely by *naming* the elite entities. A description is comprised of sentences, not of names. One must combine the names with syncategorematic expressions to form sentences. The goal

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<sup>11</sup>Sider will need to further characterize the relation of “correspondence”. This requires addressing the paradox of the concept of horse discussed in Frege (1951), Wiggins (1984), and Wright (2004). I suspect that Sider would say either that correspondence, like fundamentality, can be meaningfully concatenated with expressions of different syntactic types, or that the notion of correspondence should be stratified.

<sup>12</sup>See Lewis (1999b) on natural properties; Armstrong (1980a,b) on sparse universals; Armstrong (1997) on states of affairs and truth-makers; and Schaffer (2009) on fundamental entities.

is to formulate a description that characterizes the world completely, but at the same time excludes misbehaved truths such as those containing ‘is grue’ and ‘is bleen’. One might argue that a complete and privileged description of the world must name—and perhaps assert the existence of—every entity, and *nothing else*.

**The world as described by a list of elite entities:** A theory is a privileged description of reality just in case it (i) is true; (ii) contains names for elite entities only; (iii) asserts the existence of such entities (and perhaps *that they are fundamental*); and (iv) asserts nothing else.

Sider (2012: §§8.5-8.6) interprets certain versions of truth-maker theory along these lines: a maximal and true theory satisfying (i)-(iv) is a *complete description of reality*. On his reading of these views, the whole nature of reality is “explained” by the existence of certain fundamental entities.

The characterization of a privileged description excludes predicates such as ‘is grue’ from the description. But, it does so by excluding all predicates from the description. A complete description of reality must say not only which entities there are, but also—in the vocabulary of Lewis (1999a: 206)—how they are. How can a mere list of the entities that exist—such as Kermit, Gonzo, Bunsen, and so on—account for the fact that *Kermit is green*? Crucial information is lost from our description of the world.<sup>13</sup>

Sider (2012: §§7.3,8.5) considers one possible response. The proponent of the entity-based approach might respond by introducing *syntactically complex* singular terms—such as ‘the fact that Kermit is green’, ‘Kermit’s greenness’, or simply ‘green Kermit’—and argue that the existence claims involving these expressions completely describe the world. The obvious worry, however, is that we must discriminate the privileged complex singular terms from the unprivileged ones. Thus,

<sup>13</sup>Sider (2012: 96) reads Armstrong as holding that the metaphysical complexity of a theory is given by the particulars and universals that it posits and concludes: “although ‘instantiates’ is an ineliminable part of his ideology, he cannot recognize ‘instantiates’ as fundamental, in the way that he recognizes fundamental physical predicates as fundamental. But claims specifying which particulars instantiate which universals are clearly part of Armstrong’s fundamental theory of the world. Merely to list the universals and particulars, without specifying which particulars instantiate which universals, would be a woefully partial description of what, according to him, the world is fundamentally like.”



‘green Kermit’ is a good complex singular term, but ‘grue Kermit’ is not, even though these two expressions might denote the same individual, Kermit, who is both green and grue. To discriminate the privileged complex singular terms from the others, we must seemingly discriminate between the syncategorematic expressions that figure into them.

More importantly, the description already contains sentences composed of both names and *syncategorematic* expressions such as ‘exists’ and ‘is fundamental’. Sider complains, rightly, that these non-names are subject to deviant alternatives. For instance, he (2012: 96) points to recent debates over quantifier variance, the possibility of multiple quantifiers differing from each other just as ‘grue’ differs from ‘blue’. In Sider’s view, we ought to prefer some of these quantifiers to others, and the reason for this preference ought to be grounded in a metaphysical difference between the privileged, joint-carving quantifier and the other deviant ones. Once again, the proponent of the entity-based view must offer some metaphysical ground distinguishing the syncategorematic expressions that are admissible into our privileged description of the world from those that are deviant.

**2.1. The Worldly Correspondents of Syncategorematic Expressions.** Armstrong (1980a,b) and Lewis (1999b) purport to provide the ground to distinguish privileged syncategorematic expressions from ordinary ones, at least in the case of predicates. As Sider understands them, every *predicate* used to express a privileged description of the world must correspond to some elite entity, characterized using a *nominalization* of that predicate. Thus, they think of simple predicates in an ideal theory as contributing *entities* of a special sort: sparse *universals* for Armstrong and *natural properties* for Lewis. On this sort of view, non-names make their way into the privileged description. A predicate such as ‘is green’ can be included, provided that it corresponds to a universal or natural property. Unwelcome predicates such as ‘is grue’ can be excluded, provided that they fail to correspond to a universal or natural property.

Sider (2012: §6.1) complains that the focus on predicates is too narrow, since expressions of any syntactic category can give rise to strangeness and misbehavior of the sort exemplified by ‘grue’ and ‘bleen’. For this reason, Sider prefers his view that there is a range of elite or fundamental *non-entities*, and in a completely successful theory, *every* expression—not just every predicate—corresponds to one of these elite non-entities.<sup>14</sup>

Still, there is an obvious solution which does not require endorsing Sider’s no-entity view. Perhaps every expression purports to correspond to an elite entity, whether or not that entity is an individual, a property, an operator meaning, or what have you. Spelling this view out a bit:

**Vocabulary and Elite Entities:** A theory is a privileged description of reality just in case (i\*) it is true and (ii\*) every expression used to express the theory corresponds to a privileged entity.

On such a view, a maximal description satisfying (i\*) and (ii\*) is a complete description of reality. For instance, Bealer (1982) posits entities that correspond to expressions of every syntactic type in our language. Bealer refers to these entities using nominalizations. Thus, ‘and’ corresponds to *conjunction* and ‘there are’ corresponds to *existence* or the second-level property of having an instance. Expressions of any syntactic category may correspond to elite or to ordinary entities.<sup>15</sup> A metaphysics of this sort seems to satisfy Sider’s demand that an inventory of the elite entities provides the resources to completely describe the world.

Sider offers two arguments against views of this sort. One sort of argument appeals to his distaste for these types of entities: “the treatment of quantifiers as denoting second-order properties or relations, however appropriate in linguistic theory, does not ring true at a metaphysical level” (Sider 2012: 90). I find this sort of argument less compelling. We are considering metaphysical approaches to the

<sup>14</sup>Sider cites other advantages to characterizing the privileged description in terms of *non-entities* rather than entities: his framework is more neutral (§6.0) and debates over whether something exists *don’t seem like* debates about whether a property has a second-level property (§6.3).

<sup>15</sup>The mere fact that every expression in a sentence corresponds to an elite entity does not, for Bealer, entail that the sentence is structural, or—as he would say—expresses a condition. Thus, Bealer is a propositionalist, discussed in §5.

problem of deviant descriptions. Any such approach, including Sider’s own, will be metaphysically committed. It is by no means obvious in this point of the dialectic that the entity-based approach will have more elements that fail to “ring true” than Sider’s own.

Fortunately, Sider has a more compelling argument. Thus far, his position has been to suggest that entity-based approaches leave something out. Now, Sider (2012: 90, footnote 8) argues that any such description of the world will still require a representational device—the syntactic relation of concatenation—that corresponds to no entity.

[O]ne can treat all expressions as standing for entities [...] although then there is a meaningful syntactic operation—concatenation—that stands for no entity.

The basic expressions of a sentence such as ‘Kermit is green’ might correspond to elite entities while the grammar of the sentence is interpreted freely.<sup>16</sup>

Consider a language which has the same vocabulary as the language of the S-P description given above. In this language, ‘Kermit’ corresponds to *Kermit* and ‘is green’ to *the property of being green*. In the original S-P description—as understood by the entity-based views—sentences are formed by concatenating a subject ‘ $\alpha$ ’ with a predicate ‘is  $F$ ’ to yield ‘ $\alpha$  is  $F$ ’. Sentences of this form are governed by the following axiom schema.

**Concatenation in the S-P language:** ‘ $\alpha$  is  $F$ ’ is true if and only if  $\alpha$  has the property corresponding to ‘is  $F$ ’.

The alternate language is not a subject-predicate language, but a predicate-subject (P-S) language. From a name  $\alpha$  and a singular term ‘is  $F$ ’, one can form the sentence ‘is  $F(\alpha)$ ’. (I add parentheses for legibility.) Predicate-subject sentences in the P-S language have the following truth conditions.

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<sup>16</sup>Recent discussion of related issues can be found in Davidson (2005), MacBride (2006), and Magidor (2009).

**Concatenation in the P-S language:**  $\ulcorner \text{is } F(\alpha) \urcorner$  is true if and only if  $\alpha$  has the property corresponding to  $\ulcorner \text{is } F \urcorner$  and is observed before  $t$  or is blue and is unobserved before  $t$ .

As a result of this interpretation of the truth conditions of sentences of the P-S language, the sentence ‘is green(Kermit)’ has the same truth conditions as ‘Kermit is grue’ and is liable to cause the same mischief. Therefore, it cannot be counted as a structural truth. But the entity-based approach has no way of ruling out the sentences of languages whose concatenation relation has such a deviant interpretation. As formulated, the view entails that such a language is privileged, since every expression stands for a privileged entity.

The P-S language illustrates that grammatical features *can* have truth conditional effects so that a sentence composed of structural vocabulary can nonetheless be deviant. Admittedly, the deviance is rather coarse insofar as it affects the truth conditions of every sentence in the language. By way of contrast, Goodman’s predicates ‘grue’ and ‘bleen’ introduce deviance only for particular sentences. But once the possibility of a deviant grammar has been introduced, it is easy to construct subtler deviant grammatical relations. For instance, one can specify a language so that sentences of the form  $\ulcorner \text{is green}(\alpha) \urcorner$  and  $\ulcorner \text{is blue}(\alpha) \urcorner$  have the same truth conditions as  $\ulcorner \alpha \text{ is grue} \urcorner$  and  $\ulcorner \beta \text{ is bleen} \urcorner$ , respectively, but the truth conditions of every other sentence remain the same.

**Subtler P-S language:**  $\ulcorner \text{is } F(\alpha) \urcorner$  is true if and only if

- $\alpha$  has the property corresponding to  $\ulcorner \text{is } F \urcorner$  and  $\ulcorner \text{is } F \urcorner$  corresponds to neither the property of being blue nor the property of being green, or
- $\alpha$  has the property corresponding to  $\ulcorner \text{is } F \urcorner$  and is observed before  $t$  or is green and is unobserved before  $t$  and  $\ulcorner \text{is } F \urcorner$  corresponds to the property of being blue, or
- $\alpha$  has the property corresponding to  $\ulcorner \text{is } F \urcorner$  and is observed before  $t$  or is blue and is unobserved before  $t$  and  $\ulcorner \text{is } F \urcorner$  corresponds to the property of being green.

In what follows, I will restrict my attention to the coarser kind of deviant language for simplicity. But everything could be reframed in terms of the subtler sort of deviance introduced above.

**2.2. Is the P-S Language Possible?** The question arises: why am I entitled to assume that the expressions ‘Kermit’ and ‘is green’ in the P-S language continue to correspond to the same things in the S-P and P-S languages? Let me first note that Sider and his opponents are considering languages characterized rather abstractly. So there is simply no question whether or not there is a language satisfying the characterization.<sup>17</sup> There remains an interesting question of whether such a language can be spoken by some possible community. If a language so characterized is in principle unspeakable, then the proponent of the entity-based view could appeal to this fact to account for its strangeness, rather than to anything metaphysical.

I believe that this language is possible. Imagine that it arises out of the S-P language as follows.

**Stage 1:** The inquirers continue to assert S-P sentences such as ‘Kermit is green’, but begin asserting predicate-subject (P-S) sentences such as ‘is green(Kermit)’, introduced by the stipulation: a sentence of the form ‘ $\lceil \text{is green}(\alpha) \rceil$ ’ is true if and only if the referent of ‘ $\lceil \alpha \rceil$ ’ is green and observed before time  $t$  or is blue and unobserved before time  $t$ . Corresponding stipulations are made for the other predicates of the language.

**Stage 2:** The inquirers regard ‘is green’ as having the same semantic function in ‘Kermit is green’ and in ‘is green(Kermit)’. This is witnessed by their willingness to use these in coordination and ellipsis. Thus, they assert both ‘Kermit is green. Bunsen is too’ and ‘Kermit is green. Is too(Gonzo)’. The sentences of the latter sequence are true on account of the fact that Kermit is green and Gonzo is unobserved before  $t$ .

**Stage 3:** The inquirers abandon the S-P construction, leaving only the P-S construction.

Charity would suggest that we should interpret the vocabulary of the language as unchanged. I will consider this issue in more depth in §4.1.

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<sup>17</sup>Thanks to Richard Woodward for emphasizing this point.

**2.3. Privileged Concatenation.** A proponent of entity-based views could reply that there must also be a privileged *entity*—the privileged instantiation relation—to which the concatenation relation in a privileged language must correspond. According to this response, the concatenation relation of the sentences of the P-S language fails to correspond to such a relation. Thus, ‘is green(Kermit)’ is not a structural truth.

Unfortunately, a response of this sort faces well-known difficulties. The fact that the names of a privileged language must correspond to privileged individuals, the predicates must correspond to privileged properties, and the concatenation relation must correspond to the privileged instantiation relation still fails to pin down the truth conditions of a sentence that concatenates a name with a predicate. One must additionally say that a sentence that S-P concatenates a name ‘ $\alpha$ ’ with a predicate ‘is  $F$ ’ is true just in case that privileged instantiation relation *actually relates* the individual corresponding to the name with the property corresponding to the predicate. We could represent this condition as *Instantiation*( $\alpha$ , the property of being  $F$ ). It would follow that the truth conditions for ‘ $\alpha$  is  $F$ ’ could be given as follows.

**Instantiation:** ‘ $\alpha$  is  $F$ ’ is true if and only if *Instantiation*( $\alpha$ , the property of being  $F$ ).

Unfortunately, the requirement that the concatenation relation of a language corresponds to a fundamental entity can be satisfied by deviant languages. For instance: a sentence ‘is  $F(\alpha)$ ’ is true just in case  $\alpha$  either is actually related by the instantiation relation (designated by the concatenation relation) to the property corresponding to ‘is  $F$ ’ and is observed before  $t$  or is blue and unobserved before  $t$ . We could represent this latter relation between  $\alpha$ , the property of being  $F$ , and *Instantiation* by a slight syntactic rearrangement: ( $\alpha$ , being  $F$ )*Instantiation*.

**Backwards-Instantiation:** ‘is  $F(\alpha)$ ’ is true if and only if ( $\alpha$ , the property of being  $F$ )*Instantiation*.

A proponent of the entity-approach could rule out this interpretation by privileging a relation relates instantiation to  $\alpha$  and the property of being  $F$  in the right way. Call this the *actually relating relation*. Yet, this merely spins us around once again without having caught our tail. The same problem of specifying the truth conditions of a sentence in terms of these four items—Kermit, the property of being green, instantiation, and the relation of actually relating—recurs once again. We therefore seem to require a representational device that does not to designate an entity.

A subtle maneuver at this point would be to say something of greater depth about the notion of *correspondence*, and in particular what it is for a syntactic relation to correspond to an element in reality. I have been presupposing very little about correspondence: mainly that correspondence is a relationship between aspects of language and aspects of the world. One might attempt to offer a functional definition of what it is for the concatenation relation to denote another relation. There are ways of implementing such a functional definition which would require the denotation of the concatenation relation to relate the denotation of the subject to the denotation of an object in a certain way. For instance, one might say that the denotation of the concatenation relation is constrained by the following.

**Correspondence:** The concatenation relation  $R$  uniting the sentence  $\ulcorner \alpha$  is  $F \urcorner$  corresponds to the relation  $R^*$  only if  $\ulcorner \alpha$  is  $F \urcorner$  is true if and only if  $R^*(\alpha, \text{the property of being } F)$ .

On this account, the truth conditions I articulated as **Backwards-Instantiation** would be impossible.

But the maneuver privileges one interpretation of concatenation over others without providing any reason to do so. That is, we might ask, why the concatenation relation *must* be interpreted as relating the  $\alpha$  to the property of being  $F$  in desired way. What prohibits an interpretation schema such as the following?

**Backwards-Correspondence:** The concatenation relation  $R$  uniting the sentence  $\ulcorner \alpha$  is  $F \urcorner$  corresponds to the relation  $R^*$  only if  $\ulcorner \alpha$  is  $F \urcorner$  is true if and only if  $(\alpha, \text{the property of being } F)R^*$ .

On natural answer is that there is something more natural meant by the concatenation relation in sentences of the form  $\ulcorner R^*(\alpha, \text{the property of being } F) \urcorner$  than in sentences of the form  $\ulcorner (\alpha, \text{the property of being } F) R^* \urcorner$ . But this merely iterates the problem again.

In the dialectical context, this seems like special pleading. Let's move back a step. Consider the initial claim that if we interpret a predicate as standing for an entity, then the truth conditions of a sentence must make use of an additional syncategorematic term such as 'instantiates' to link the denotation of a subject with the denotation of the predicate. A corresponding move could build this relationship into what it means for a predicate to correspond to a property. That is, we might impose the following requirement on a predicate corresponding to a property:

**Predicate Correspondence:** The worldly correspondent of a predicate  $\ulcorner \text{is } F \urcorner$  is property  $P$  only if  $\ulcorner \alpha \text{ is } F \urcorner$  is true if and only if  $\text{Instantiates}(\alpha, P)$ .

This account would effectively build the semantic function of the relevant syntactic relation into the condition a property has to meet to be the worldly correspondent of a predicate. But we have been assuming that it is reasonable to ask why a sentence must be interpreted in a certain way, even assuming that its subject and predicate are interpreted to correspond to a given object and property, respectively. I see no reason why the same worry shouldn't now apply in the interpretation of the concatenation relation.

**2.4. Saying and Showing.** Sider does offer a poisoned pawn to his opponents who insist on specifying the worldly correlates of their expressions as entities. Perhaps, Sider suggests, the proponent of an entity-based metaphysics could make use of Wittgenstein's (1921/2001) distinction between *saying* and *showing*. On such a view, the resources used to characterize the connections among the various fundamental ingredients of our metaphysics cannot be isolated out. They will be *shown* by the choice of whole sentences in our language. But there is nothing *said* in our preferred theory that distinguishes these sentences from other sentences with other



structures that one might speak. Sider (2012: 96) suggests that such a position is mysterious:

[One] might, in Wittgensteinian fashion, reply that one cannot *say* the whole truth about fundamentality. The whole truth can only be *shown*, by quantifying over entities, saying that particulars instantiate universals, and so on. If this position is uncomfortable, that is a reason to reject [entity-based metaphysics] and to adopt a broader conception of metaphysical commitment.

In the remainder of this paper, I will show that Sider’s admirable commitment to clarity leads him into trouble.

### 3. THE WORLD IS NOT A LIST OF NON-ENTITIES.

The argument against the entity-based view purported to show that a sentence could be deviant even if all of the expressions it contains correspond to elite entities. In particular, it does not follow merely from the fact that ‘Kermit’ corresponds to Kermit and ‘is green’ corresponds to the property of being green, that the truth conditions of the sentence ‘Kermit is green’ are as follows.

**Truth Conditions:** ‘Kermit is green’ is true if and only if Kermit *instantiates* the property of being green.

The reason is that we can have a sentence with the exact same vocabulary, but with clearly *deviant* truth conditions.

**Deviant Truth Conditions:** ‘Is green(Kermit)’ is true if and only if Kermit *instantiates* the property of being green and is observed before  $t$  or is blue and is unobserved before  $t$ .

‘Is green(Kermit)’ has the same vocabulary as ‘Kermit is green’ but has a different grammar. The grammar makes a truth conditional contribution that cannot be assessed at the level of vocabulary. The example of ‘is green(Kermit)’ shows that a sentence can be deviant even though all of its vocabulary is privileged. The deviance here is most plausibly attributed to grammar.

Recall that on Sider’s view whether a sentence is deviant or structural is determined entirely by the vocabulary that composes it: “a structural truth is just a

true sentence composed of only joint-carving expressions” (Sider 2012: 148). Indeed, Sider (2012: 148) cites his account’s insensitivity to grammar as a virtue. He endorses a combinatorial principle as a consequence of his explicit characterization of a structural truth.

**Combinatorial Principle:** If  $S$  is a [structural] truth, and  $S'$  is any true sentence containing no expressions other than those occurring in  $S$ , then  $S'$  is a [structural] truth.

This principle tells us that if ‘Miss Piggy loves Kermit’ is a structural truth, and the love is requited, then ‘Kermit loves Miss Piggy’ is a structural truth as well.

This should make us nervous. Given the assumption that the sentence ‘Kermit is green’ is a structural truth, it should follow that any true sentence containing the same vocabulary is also structural. This presupposes that the worldly correspondents of the vocabulary in a sentence exhaust the sentence’s *representational features*. Equivalently, Sider presupposes that no representational features of the sentence other than its vocabulary can exhibit misbehavior of the sort that ‘is grue’ does. But this assumption is unwarranted in light of the criticism of the entity-based views. These criticisms showed that the *grammar* of the sentence is a representational feature. We just saw how—on the entity-based view—a sentence such as ‘is green(Kermit)’ with non-deviant vocabulary can be deviant as a result of the contribution of its grammar.

Superficially, it might seem that Sider’s no-entity approach avoids this problem. In the case of an entity-based approach, the additional truth conditional contribution of the grammatical relation in ‘Kermit is green’ is made explicit by the relational predicate ‘instantiates’ in the statements of the truth conditions. Sider does not need to deploy an additional *predicate* such as ‘instantiates’ to state the truth conditions of ‘Kermit is green’. On his view, ‘Kermit’ corresponds to *Kermit* and ‘is green’ corresponds to *is green*. Sider can state the truth conditions for ‘Kermit is green’ using vocabulary that deploys just these two notions:

**Truth Conditions** ‘Kermit is green’ is true if and only if Kermit is green.

However, Sider’s theory merely disguises, rather than eliminates, the truth conditional contribution of grammar.

In particular, the truth conditions of ‘Kermit is green’ require that the grammatical relationship of concatenation is interpreted as follows.

**Concatenation:**  $\lceil \alpha \text{ is } F \rceil$  is true if and only if  $\alpha$  is  $F$ .

But there are possible languages such as the P-S language which interpret concatenation differently. P-S concatenation as it occurs in ‘is green(Kermit)’ is interpreted as follows.

**Deviant Concatenation:**  $\lceil \text{is } F(\alpha) \rceil$  is true if and only if  $\alpha$  is  $F$  and is observed before  $t$  or is blue and is unobserved before  $t$ .

It follows from this that ‘is green(Kermit)’ has deviant truth conditions. It is true if and only if Kermit is grue. But its vocabulary, ‘Kermit’ and ‘is green’, correspond to fundamental notions only: *Kermit* and *is green*. So Sider’s account wrongly rules that ‘is green(Kermit)’ is a structural truth as well.

This reveals that Sider’s argument does not target the entity-based view as such. Rather, it targets views—such as the one that Sider himself holds—which attempt to characterize whether a sentence is structural wholly in terms of its vocabulary. One cannot do this if one wants to hold that ‘Kermit is green’ is privileged, but ‘is green(Kermit)’ is not. Appealing only to vocabulary and not grammar will lead either to Wittgensteinian silence as to why one sentence is structural but the other is not or it will lead to the combinatorial principle. But the combinatorial principle says that the if two truths have the same vocabulary, then they are both structural. Thus, any account purporting to distinguish the structural truths from the nonstructural truths must have something to say about grammar.<sup>18</sup>

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<sup>18</sup>This section was greatly improved by suggestions from an anonymous referee from *Noûs*.

## 4. DEFENDING THE P-S LANGUAGE

The P-S language shows that the vocabulary of a language does not exhaust its representational complexity. I now respond to a potential objection and some refinements that Sider might offer to save his view by ruling out the P-S language. The objection I consider holds that the sentences of the P-S language cannot have the truth conditions specified above while their vocabulary items retain the same meanings they have in the S-P language. The refinements of Sider's view concern the possibility of privileging the concatenation relation and the possibility of building grammatical rules into the vocabulary. I argue that neither the objection nor the refinements can avoid the fundamental problem. Finally, I explore the deeper source of the problem, a thesis that Sider labels *subpropositionalism*.

**4.1. Interpreting vocabulary in the P-S language.** I claim that it is possible for a community to have a language in which the name 'Kermit' corresponds to Kermit; the predicate 'is green' corresponds to *is green*; and the truth conditions of the sentence 'is green(Kermit)' are the same as those of 'Kermit is true'. If this is not possible, then Sider could account for the strangeness of the P-S description in terms of the impossibility of speaking such a language, rather than in terms of its metaphysical content. It therefore might be tempting to respond that these conditions are jointly incompatible. This response might make use of Sider's development of Lewis's idea that combines internal or use-based constraints on linguistic interpretation with other external constraints arising from the linguistic environment.

The internal or use-based constraints on interpretation are not relevant. These constraints mandate that the interpretation of a sentence should conform as far as possible with the principle of charity. To oversimplify considerably, speakers should be interpreted as speaking truly as far as is compatible with other constraints on interpretation. This constraint is satisfied in the interpretation of the possible community speaking the P-S language. It is stipulated that they assert  $\ulcorner \text{Is green}(\alpha) \urcorner$

just in case the referent of  $\ulcorner \alpha \urcorner$  is green and observed before  $t$  or blue and unobserved before  $t$ .

A partisan of Sider should appeal to the external constraints instead. Sider's (2012: §3.2) discussion is complicated, but he outlines three such constraints. First, the vocabulary ought to be interpreted as corresponding to notions that are as fundamental as possible. Second, the relationship between vocabulary items and their worldly correspondents should be as natural as possible. Third, the truth conditions of the language users' sentences should be specified by sentences that approximate structural truths as far as possible with every element in the statement of the truth condition corresponding to elements in the original sentence.

The first constraint is satisfied. If we interpret 'Kermit' as corresponding to Kermit and 'is green' to *is green*, then the vocabulary composing 'is green(Kermit)' is interpreted as corresponding to fundamental elements. The second constraint also looks to be satisfied in the case as I described it. For, we may suppose that 'Kermit' and 'is green' in the original S-P language stand in highly natural relations to *Kermit* and *is green*, respectively. I have further stipulated that the uses of these expressions in P-S constructions are causally linked to uses in S-P constructions. The relationship between these expressions and their worldly correspondents is, therefore, still fairly fundamental. Even if the relation is less than perfectly fundamental, it is clearly not so gerrymandered and gruesome as to override the stipulated use facts (such as the ellipsis behaviors of the community members). So, I assume that Sider cannot object that the interpretation fails to satisfy the second constraint.

The third constraint is more problematic. Recall that the sentences of the P-S language of the form  $\ulcorner \text{is green}(\alpha) \urcorner$  are characterized by the following axiom schema.

**P-S Truth Conditions:**  $\ulcorner \text{is green}(\alpha) \urcorner$  is true if and only if  $\alpha$  is green and observed before time  $t$  or is blue and unobserved before time  $t$

The righthand side of this biconditional introduces many vocabulary items not present in the original sentence. Moreover, these vocabulary items are not joint-carving. But, both of these features are dispensable.

The speakers of the P-S language may offer a more compact statement of the truth conditions of this sentence. Indeed, their statement of the truth conditions for  $\ulcorner \text{is green}(\alpha) \urcorner$  may involve no vocabulary items beyond those in  $\ulcorner \alpha \text{ is green} \urcorner$ .

**Disquotational P-S Truth Conditions:**  $\ulcorner \text{is green}(\alpha) \urcorner$  is true if and only if *is green*( $\alpha$ ).

That is, the speakers of the P-S language may *use* P-S constructions in order to characterize the truth conditions of P-S sentences. So the sentence has joint carving vocabulary and is fully disquotational. Yet it still has the problematic truth conditions described above.

The external constraints put pressure on my interpretation of ‘is green(Kermit)’ just in case the sentence which specifies its truth conditions fails to be structural. But in the semantic theory under consideration, the sentence is used to specify its own truth conditions. In other words, a challenge to my interpretation of the P-S language *antecedently presupposes* that the sentences of the P-S language are not structural. But, ‘is green(Kermit)’ is both true and contains vocabulary that correspond to fundamental notions only. It therefore satisfies Sider’s explicit definitions of structural truth. For this reason, I think the best strategy for Sider is not to argue that the existence of a language satisfying conditions I have described is *impossible*, but rather to reinforce his definition of structural truth by positing additional requirements. I now turn to strategies of this sort.

**4.2. Interpreting the grammatical relations in the P-S language.** The example of the P-S language shows that sentences deploy more representational devices than the vocabulary they contain. The grammatical structure of a sentence also matters to its representational complexity. Notice that this objection exactly

parallels Sider's challenge to the entity-based view. He *concedes* that a proponent of the entity-based view could insist that every expression must correspond to a privileged entity, but argues that there must still be a representational device, concatenation, that does not correspond to an entity. What I am arguing is that the addition of non-entities—such as *is green*, *is blue*, and so on—does nothing to change this dialectic. The representational device contributes to the *truth conditions* of sentences that deploy it. But if it does not contribute an entity towards specifying these truth conditions, then it does not contribute a *nonentity* either.

In reply to this challenge, Sider might take a page from Lewis's (2000a) response to Hawthorne (1990). Hawthorne raised Goodman-like deviant interpretations of grammatical relations to challenge Lewis's theory of interpretation. Lewis responded that on preferred interpretations of a language, not only the vocabulary, but also the grammatical relations should be interpreted as natural. Better interpretations of a target language ascribe a *straight* and not *bent* meaning to its grammatical relations. Following Lewis's lead, Sider might modify his characterization of *structural truth*. Instead of saying that a sentence is a structural truth when its *vocabulary* corresponds to only fundamental notions, he might say that both the vocabulary *and the meaningful grammatical relations* must correspond to fundamental notions. The sentence 'Kermit is green' of the S-P language deploys subject-predicate (S-P) concatenation. Sider might postulate that the S-P concatenation corresponds to a fundamental notion. Unlike the previous cases, he cannot simply *disquote* to specify which fundamental notion. Disquoting the concatenation relation leaves no expression to which to attach the fundamentality operator,  $\ulcorner \S(\dots) \urcorner$ . Thus, Sider would need some expression to designate the worldly correspondent of the concatenation relation. I will use '*INST*'. A sentence of the form  $\ulcorner INST(\alpha, \Phi) \urcorner$  is true just in case  $\alpha$  is  $\Phi$ . By way of contrast, a P-S sentence such as 'is green(Kermit)' deploys P-S concatenation. According to this response, even

if P-S concatenation corresponds to a notion, it does not correspond to a fundamental one. Thus, the truths of the P-S language are not fundamental truths on the revised account.

This responses exactly parallels the one that I offered on behalf entity-based views. I suggested that proponents of this views modify their account to require both that every expression corresponds to a privileged entity and that every grammatical relation do so as well. I imagined them positing a privileged relation, *instantiation*, to correspond with the grammatical relation of the privileged language. We saw that specifying the entities that correspond to the vocabulary and grammatical relations in a sentence falls short of determining its truth conditions.

I doubt that Sider would have better luck with this strategy. The strategy assumes that if the sentence ‘Kermit is green’ is an S-P concatenation of the name ‘Kermit’ and the predicate ‘is green’ where S-P concatenation corresponds to *INST*, ‘Kermit’ to Kermit, and ‘is green’ to *is green*, then the truth conditions of the sentence must be as follows.

**S-P Truth Conditions, Revised:** ‘Kermit is green’ is true if and only if  $INST(\text{Kermit}, \text{is green})$ .

But, this merely pushes the problem back a step. It introduces a new notion *INST* to “glue together” Kermit with the notion *is green* in the specification of the truth conditions. But, this is done by introducing a new syntactic relation between the expressions ‘*INST*’, ‘Kermit’, and ‘is green’ on the righthand side of the biconditional. And this new syntactic relation may itself be contrasted with deviant ones.

Consider an alternative statement of the truth conditions of the P-S language. The proponent of this interpretation uses ‘*INST*’ to state the relationship between the subject and the predicate of a P-S concatenation. But the syntactic relationship between ‘*INST*’ and these terms is changed as follows: ‘ $\lceil(\alpha, \Phi)INST\rceil$ ’ is true if and only if  $INST(\alpha, \Phi)$  and  $\alpha$  is observed before  $t$  or  $INST(\alpha, \text{is blue})$  and  $\alpha$  is



unobserved before  $t$ . The truth conditions of ‘is green(Kermit)’ can be stated as follows.

**P-S Truth Conditions, Revised:** ‘is green(Kermit)’ is true if and only if  
 (Kermit, *is green*) *INST*.

In ‘is green(Kermit)’, the vocabulary items correspond to fundamental elements as does the concatenation relation. But the truth conditions of this sentence still seem deviant. The problem now is that the statement of the truth conditions makes use of a different syntactic relation between ‘INST’, ‘Kermit’, and ‘is green’, which is not natural.

One could require that in the statement of the truth conditions, there must also be a fundamental notion gluing the worldly correspondent of the concatenation relation with the worldly correspondents of the vocabulary items. But, this new notion will have to be glued by a new syntactic relation both to the worldly correspondent of the concatenation relation and to the worldly correspondents of the vocabulary. We are beginning to see, I think, that concatenation is a representational device that emerges at the level of whole sentences. It is at this level that its contribution must be assessed. One cannot, as it were, separate out its contribution to the truth conditions of a sentence. Before I explore this possibility, I will examine one last challenge to the P-S language.

**4.3. Does vocabulary determine grammar?** Occasionally, Sider (2009: §8, especially footnote 40; 2012: §6.3) considers a variation on his view which has some relevance to the argument from deviant grammar. To develop this variation, I must make explicit an assumption behind the argument. I have assumed that the basic vocabulary of a structural language would look like the vocabulary of the S-P language, containing names such as ‘Kermit’, ‘Bunsen’, and ‘Gonzo’; predicates such as ‘is green’ and ‘is blue’; and sentential operators such as ‘it is not the case that’, ‘and’, and ‘or’. I have assumed that sentences of this language are formed by *concatenating* this basic vocabulary. Thus, the result of S-P concatenating a

name with a predicate is a sentence. The result of concatenating  $n$  sentences with an  $n$ -ary sentential operator is a sentence, and so on.

Sider considers the possibility that the predicates such as ‘is green’ and ‘is blue’ are not expressions of the structural language. The sentence ‘Kermit is green’ is not composed by concatenating ‘Kermit’ with ‘is green’. Rather, the primitive expressions are either *saturated* or *unsaturated*. The unsaturated expressions include predicates and  $n$ -ary operators. The proper expressions of the predicates marks the fact that they are unsaturated. Thus, the proper expression of the predicates are ‘ $x$  is green’ and ‘ $x$  is blue’ rather than ‘is green’ and ‘is blue’. The sentence ‘Kermit is green’ is formed by *replacing* the “dummy variable”  $x$  with a name of the right syntactic category. Similarly,  $n$ -ary sentential operators must have  $n$  sentence-level dummy variables. Thus, the sentence, ‘it is not the case that Kermit is blue’ results from *replacing* ‘ $p$ ’ with ‘Kermit is blue’ in ‘it is not the case that  $p$ ’. This approach is reminiscent of Frege’s (1951) view of predicates as *unsaturated* expressions that contain a mark of incompleteness and also of Wittgenstein’s (1921/2001) view that an *object* has certain possibilities of combination in facts, and that these possibilities must be reflected in the grammatical sentences in which a name for this object can occur.

Developing this idea, the grammatical possibilities for an expression are marked by dummy variables within the expression. Sider might argue that ‘is green(Kermit)’ is not a *substitution instance* of ‘ $x$  is green’ since the sentence is not syntactically derived from this predicate. In other words, if expression  $E$  has different syntactic possibilities in languages  $L$  and  $L^*$ , then  $E$  means different things in these two languages. It follows that Sider has a principled reason for saying that ‘Kermit is green’ and ‘is green(Kermit)’ contain different predicates. ‘Kermit is green’ contains ‘ $x$  is green’. ‘Is green(Kermit)’ contains ‘is green( $x$ )’.

This approach trades one syntactic relation—concatenation—for a different relation, *substitution*. Unfortunately, the latter syntactic relation is liable to get up to the same mischief as the former. Consider again the speakers of the P-S language.

I concede that their sentences are not substitution instances of ‘ $x$  is green’ on the grounds that they have different syntax. But this can be remedied by considering a final stage in their linguistic development. In this final stage, they revert back to the old syntax, but with a new meaning. That is, they go back to asserting subject-predicate sentences, but the sentences have the meanings of the predicate-subject ones. They assert ‘Kermit is green’, ‘Bunsen is green’, and ‘Gonzo is green’. These sentences are true on account of the fact that the three are either green and observed before  $t$  or blue and unobserved before  $t$ , but the deviance results from the interpretation of the substitution relation and not the meaning of the predicate.

In the original S-P language, the substitution relation is characterized by the following schema.

**Substitution in the original S-P language:** The result of substituting a name  $\ulcorner \alpha \urcorner$  into a predicate  $\ulcorner x \text{ is } F \urcorner$ ,  $\ulcorner \alpha \text{ is } F \urcorner$ , is true if and only if  $\alpha$  is  $F$ .

In the revised S-P language, the substitution relation is characterized by the following gruesome schema.

**Substitution in the revised S-P language:** The result of substituting a name  $\ulcorner \alpha \urcorner$  into a predicate  $\ulcorner x \text{ is } F \urcorner$ ,  $\ulcorner \alpha \text{ is } F \urcorner$ , is true if and only if  $\alpha$  is  $F$  and is observed before  $t$  or is blue and is unobserved before  $t$ .

Once again, this statement could be made compact by simply re-using the revised S-P language in its own semantic characterization. I assume that Sider would want to exclude sentences of the revised S-P language from being structural truths. The lesson is that we cannot solve the problem of deviant syntactic relations—syntactic relations with deviant meanings—just by trading one syntactic relation, concatenation, for another, substitution. For syntactic relations of either sort can be given deviant interpretations.<sup>19</sup>

<sup>19</sup>Sider (2012: §11.8) revisits the issue, suggesting that a sentence such as ‘Kermit is green’ is structural, but a sentence with the same vocabulary such as ‘is green(Kermit)’ is not on account of the fact that the former, but not the latter, is a substitution instance of the variable for the grammatical category of sentence, ‘ $p$ ’. This proposal doesn’t seem to change the dialectic.

## 5. SIDER AGAINST PROPOSITIONALISM

According to Sider, whether a truth is structural is to be explained wholly in terms of its subsentential constituents. Sider (2012: §7.10) says his view is *subpropositional*. Reflecting the world's structure is not an emergent feature of a sentence. This is what raises the problem for Sider. For—I have argued—Sider must hold that some truths such as 'is green(Kermit)' fail to be structural even though their primitive vocabulary is joint-carving. Requiring that the grammatical relations of this sentence be joint-carving also fails to do the job. The difficulty, we might think, is that the truth conditions of a sentence are emergent. They cannot be specified merely by specifying the worldly correspondents of the vocabulary and syntactic relations.

A propositional account—an account according which appeals to distinctions at the level of whole sentences—would avoid these problems. For instance, Kit Fine introduces two notions—grounding and reality—which attach to whole sentences as follows.

**Fact Grounding:** 'its being the case that ... consists in nothing more than its being the case that ...'<sup>20</sup>

**Reality:** 'it is constitutive of reality that...'<sup>21</sup>

Using these two notions, Fine draws distinctions that seem very close to Sider's distinction between mere truths and structural truths. For instance, grounded truths differ from fundamental grounds. A truth  $S$  is a fundamental ground, if no sentence of the form 'its being the case that  $S$  consists in nothing more than its being the case that  $\Phi$ ' is true. Relatedly, mere truths differ from truths that are constitutive of reality—truths  $S$  such that 'it is constitutive of reality that  $S$ ' is true. The notions of grounding and reality are not defined in terms of the constituents of the sentences to which they apply. As a consequence, Fine's account can rule that 'it is not constitutive of reality that is green(Kermit)', but that 'it

<sup>20</sup>Fine (2001: 15).

<sup>21</sup>Fine (2001: 26, footnote 37).

is constitutive of reality that Kermit is green', even though the two truths contain the same vocabulary.

Sider has kind words for Fine's two options and offers what may seem at first sight to be only esoteric criticisms of each.<sup>22</sup> I will focus on one—Sider's reasons for rejecting Fine's *propositionalism*—which applies to both versions of Fine's proposal.<sup>23</sup> I believe that there is much under the surface of this criticism, and that properly developed, it reveals that Sider's is motivated by quite different considerations from those that interest Fine.<sup>24</sup>

Sider (2012: 148) argues that Fine's propositionalist accounts provide no explanation for the *combinatorial principle* that I mentioned above: a truth resulting from the arbitrary recombination of the vocabulary of a structural truth is also a structural truth. This principle falls out of Sider's account by definition. By way of contrast, Fine would have to posit a primitive connection between its being constitutive of reality that *S* and its being constitutive of reality that *S'* (or between *S* having a ground and *S'* having a ground).

But why is Sider so keen on this combinatorial principle? As Sider is aware, Fine's account is not built to deliver this combinatorial result. Fine's notion of ground is motivated to account for certain explanatory relations, expressed by claims that contain 'because' and 'in virtue of'. And a sentence containing a certain expression might hold in virtue of another sentence containing that expression. For instance, it is natural to say that the fact that Kermit *doesn't not* love Miss Piggy holds in virtue of the fact that he loves her. Indeed, Fine (2010: §5) hints at an account on which atomic sentences and their negations ground more logically complex statements, including double negations. Thus, atomic sentences and their

<sup>22</sup>Sider (2009: 403-4, footnote 40; 2012: §8.1-8.3).

<sup>23</sup>Sider directs this criticism against the account in terms of the reality operator, but the challenge clearly applies to both.

<sup>24</sup>Sider (2012: 128) has one preliminary objection, that propositional level distinctions offend against a natural picture of the world: "[T]here are some fundamental 'building blocks' [...] and the nature of reality is given by the arrangement of those building blocks." But, it is Sider's account that offends against this picture. Sider differentiates the ultimate (fundamental) and non-ultimate constituents of reality. But the *arrangements* of these constituents are given only by the fact that names for them occur in true sentences.

negations would be fundamental, but not double negations. A sentence such as ‘ $\neg\neg S$ ’ may have the same vocabulary as structural sentence ‘ $\neg S$ ’ and yet fail to be structural. So, Fine’s notion of grounding is built explicitly to allow for failures of the combinatorial principle.

Sider’s explicit motivations for the combinatorial principle strike me as underdeveloped, but when they are expanded, they reveal—I think—that Sider’s motivation of discriminating good from bad languages is not on Fine’s radar. I will focus on two, both of which are connected to Sider’s central thesis that inquiry aims at expressing only structural truths. One consideration issues from Sider’s desire to explain why the simplicity of ideology is a theoretical virtue. Why should we be inclined to accept theories that are more ideologically economical? Sider answers that using a primitive expression requires positing additional complexity in the world, one must suppose that there is a joint in nature corresponding to that expression. A theorist who deploys temporal operators to express her final theory supposes that these temporal operators are among the building blocks of reality. A theorist who deploys a negation symbol supposes that there is a notion in the world that answers to it. In Sider’s view, introducing negation might make a theory less parsimonious. But, it would be misguided to count a theory as less parsimonious for containing doubly negated claims, once the cost of negation has already been paid.<sup>25</sup>

This gives rise to a related worry about interpretation.<sup>26</sup> Because structure provides an additional constraint on good theorizing—inquiry aims at the construction of a theory containing only structural truths, it also provides a constraint on interpretation of an alien language. A good interpretation should be as charitable as is consistent with systematic theorizing to speakers of an alien language. So a good interpretation should not only maximize the sentences of an alien language interpreted as truths, but should interpret them as speaking in terms of the world’s structure. Suppose that we are confronted by a speaker who uses an expression

<sup>25</sup>Sider’s position seems in accord with Ramsey’s (1954a: 41-42): *if* negation is an element of a fact, then a truth and its double negation should state distinct facts. Of course, Sider and Ramsey differ as to whether to apply *modus ponens* or *modus tollens*.

<sup>26</sup>Sider (2012: §8.3.4) might be taken as hinting at this worry.

‘ $N$ ’, applying it to sentence  $\Phi$  whenever  $\Phi$  is not true. There is then some pressure to think of our language user as meaning negation by ‘ $N$ ’. But it hardly counts as evidence against this interpretation that the speaker is willing to assert “doubly negated” claims such as ‘ $NN\Phi$ ’. More generally, we are hardly being uncharitable to a speaker by interpreting her as having a uniform vocabulary item such as ‘ $N$ ’ that can freely combine with any sentence of her language.

This shows that the distinctions offered by Sider and by Fine are meant to achieve different purposes. Sider aims to explain why inquirers who use the ‘grue’ and ‘bleen’ vocabulary are worse inquirers. Fine—and the propositionalist more generally—has no such aims. Indeed, Fine (2009: 174) explicitly rejects the view that one should speak only in grounded terms or in terms of what’s real.

But if I am right, the full force of the ontological claims that we need to make can only properly be brought out by straddling both points of view. It is only by standing outside of reality that we able to occupy a standpoint from which the constitution of reality can be adequately described.

*Even in the course of doing metaphysics*, Fine would reject the view that one should speak only in structural terms. Rather, one should *use* non-structural sentences, even if only to deny that what it says is real. This reveals, I think, that propositional level notions are inappropriate to the task for which Sider developed the notion of structural truth.

## 6. CONCLUSION

Where does this leave us? Sider’s basic strategy is to differentiate the structural truths from mere truths in terms of the worldly correspondents of the representational devices that contribute to the truth. Thus, he suggests that the vocabulary of a structural truth must correspond to *fundamental* notions. He also hints that the syntactic relations must correspond to fundamental notions. But a sentence has representational features such as its truth conditions that emerge only at the level of whole sentences. These representational features can lead to the same sort of deviance which motivates Sider’s account in the first place. Therefore, Sider’s

account cannot succeed unless he appeals to features that emerge only at the level of a sentence, and not at the level of its subpropositional features. But Sider also aims at characterizing a privileged language—and not a privileged set of truths within a language—that can completely describe the world. An account based on these sentence-level notions looks ill-suited to characterizing such a language.

Related points have resurfaced periodically in the history of analytic philosophy. Of course, my argument appeals to considerations similar to those at the heart of Bradley's (1893) infamous argument challenging the possibility of related things. This may make some suspicious. Surely, the obvious fact that there are many related things should make us suspicious about the force of Bradley's argument. But, it is irrelevant whether the Bradley regress is sufficient to show what he intended. For, Bradley's argument is effective against specific packages of positions. And I have argued that Sider endorses one such position. Moreover, I have shown that my objection is more than fair, since Sider's rejection of various alternatives—in particular his rejection of entity-based views—appeals to the same considerations.

I want to mention one other instance because of its similarity to the current dialectic. Gustav Bergmann attempted to make progress in metaphysics by investigating to the representational devices needed to express a privileged and complete description of the world. Bergmann (1960)—like Sider—recognized that since any description of the world must be framed in terms of sentences, the *syncategorematic* features of a sentence must make some metaphysical contribution. His argument, like Sider's, appealed to the fact that any description of the world must ultimately make use of sentences whose terms stand in a relation. Yet, Bergmann still placed a metaphysical premium on the vocabulary of the privileged description, arguing that we must posit universals, since the description must contain predicates. Sellars (1962) took Bergmann to task on this point, showing through his example of 'Jumblese' that nearly all of the vocabulary of a theory (including predicates) can be dispensed with in favor of new syntactic rules that construct a sentence out of a name. Views that attempt to privilege a certain description of the world in



terms of its vocabulary only have not properly absorbed the lessons of Bradley and of Bergmann and Sellars. The book of the world must be written in both a vocabulary and a grammar, but it is impossible to completely disentangle these elements.<sup>27</sup>

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